On reflection, we had been lucky this incident had happened in the middle of the day, when *Blue Melody* had several other liveaboards standing by. Our lifejackets were stored in our cabins, and consequently beyond reach; obviously, they were stored there in the assumption that such an emergency would happen at night. I have always taken the precaution of keeping my essentials in a backpack ready for a quick evacuation should it happen, but again, it was below decks in my cabin.

As it was, we all came away with an anecdote to tell. If it had happened at night or at a remote dive site, the outcome might have been very different. *Blue Melody* did not sink, and is being refitted. Worse things happen at sea.

Next Month: What you should find out about liveaboard safety.

John Bantin is the former technical editor of DIVER magazine in the United Kingdom. For 20 years, he used and reviewed virtually every piece of equipment available in the U.K. and the U.S., and made around 300 dives per year for that purpose. He is also a professional underwater photographer, and most recently the author of Amazing Diving Stories, available at www.undercurrent.org

Why Did This Shark Diver Disappear?

did a heart attack, tiger shark or something else get him?

At 8 p.m. on July 13, the U.S. Coast Guard received a distress call about John E. Petty, a 63-year-old diver missing from the *Shear Water*, a liveaboard used by Jim Abernethy's Scuba Adventures for its controversial cage-free shark dives in the Bahamas. On the Saturday prior, Petty, a chiropractor from Longview, TX, boarded the boat along with eight other divers and four crew in Palm Beach, FL, for an eight-night expedition to Tiger Beach, 20 miles off Grand Bahama's West End, with the goal of diving with its resident population of tiger sharks. The dive took place in the late afternoon near Memory Rock, and Petty was last seen by another diver in the group during the dive.

Michael Stroscheim, manager of Scuba Adventures, told the *Longview News-Journal* that the trip was Petty's first with his company, and that *Shear Water* crew followed emergency procedures when he didn't return to the boat. "John was separated from the boat about 6:30 p.m. on Sunday. We are not really sure why. We do know that there was a current. When the crew realized he was not at the boat, they recalled the divers and initiated the search. Our protocol is 10 minutes. After that, we contacted the Coast Guard and at that point, the Coast Guard takes over."

Operating out of Miami, the Coast Guard deployed an immediate air-and-sea search operation consisting of a cutter, a fixed-wing aircraft, and a helicopter. On Tuesday, the search-and-rescue crews recovered a dive mask. On Wednesday morning, they recovered a camera and some shredded dive gear. All were on the seafloor a nautical mile from where the *Shear Water* called in. On Thursday, after covering 4,600 miles in 64 hours, the Coast Guard called off the search. Petty Officer Jon-Paul Rios of the Coast Guard's Miami station, says that because of the large tiger shark population, a fatal shark encounter could be a possibility.

But Stroscheim told *The Tribune* newspaper in the Bahamas he believed Petty was the victim of a drowning. "The evidence does not point to a shark attack in this case. The diver most likely was separated underwater in a current, and we believe he probably ran out of air because of the way the gear was found, and then was disoriented and unable to get back to the boat -- and most likely it is a drowning incident. The most important thing with the dive gear is that the buckles were unbuckled -- a shark can't do that."

Unlike many shark-diving outfits operating out of the Bahamas, Abernethy's Scuba Adventures doesn't use cages, and advertises this trip as only for divers with advanced openwater training. According to *Outside* magazine, Petty received his advanced openwater certification in early July, shortly before he left for the Bahamas. Ken Knezick, owner of the dive travel agency Island Dreams in Houston, had dived with Petty and told the *Longview News-Journal*," John is an extremely experienced and capable scuba diver."

"Petty might have panicked and drowned, not have found his way back to the group and been lost at sea, or been injured and bled to death. We may never know." Scuba Adventures runs three or four Bahamas dive expeditions every month, and Abernethy has come under fire in the past for promoting dives with shark species known to pose a threat to humans. We wrote in our April 2008 issue about how Scuba Adventures lost an Austrian diver named Markus Groh to a bull shark that apparently mistook his calf for the baitbox put at the bottom

to attract sharks. Abernethy himself has been bitten. In January 2011, he got a bite to the arm from a reef shark during an excursion to Tiger Beach. According to witnesses, Abernethy was bleeding profusely and needed stitches, but made a recovery and quickly went back to work.

And shark bites may be more than an uncommon occurrence with him, may be happening more frequently than he'd like to admit. A former employee of Scuba Adventures tells *Undercurrent* that Abernethy and one of his boat captains, George Hughes, were each bitten in the hand or arm last summer. Both were treated in the Bahamas, but Abernethy allegedly told others he was spined by a fish he was cleaning. Abernethy didn't respond to questions from *Undercurrent*.

Veteran dive writer and *Undercurrent* contributor John Bantin, who has gone on many shark dives in the Bahamas, says tiger sharks are the garbage collectors of the sea. Describing a dive he did there last summer for the British magazine *Diver*, he writes, "They'll try to eat anything, including underwater cameras, scuba tanks and in this case, evidently, me. One feels strangely detached when a huge tiger shark grabs your tank and swims off with you. It happened to me twice on the same dive, and I had started to think that my luck was running out . . . The shark, nicknamed Emma, now makes a habit of grabbing cameras and swimming off with them. It's a tiger shark's idea of a jolly jape. But my problem was that she took my tank while I was still wearing it. What do you do when a big 15-foot-long stripy fish with teeth grabs you? Well, there's not much you can do."

Regarding Petty's disappearance, Bantin tells *Undercurrent*, "If this dive did happen in the dark, [probably no one] noticed it happen. He might have panicked and drowned, he might have not found his way back to the group and been lost at sea, he might have been injured and bled to death. I fear we'll never know."

Neal Watson, president of the Bahamas Dive Association, is tired of Abernethy bringing bad publicity to Bahamas' sharks. He told *The Tribune* that Petty's disappearance is Scuba Adventures' third mishap in the Bahamas, and that the incident could be due to negligence and incompetence of the Shear Water crew. "This operation has a controversial history and does not operate under the Bahamas Diving Association's shark diving procedures and protocols that have been established to ensure safe interactive shark diving experiences." Shark feeding and shark diving is outlawed in all U.S. waters, so Scuba Adventures, based in Riviera Beach, FL, motors southeast to do cage-free shark dives in the Bahamas.

"The big issue is when you watch the *Today Show* or *Good Morning America*, [or read] the press from around the world, they never said it was a U.S.-registered dive boat that was operating in the Bahamas," says Watson. "They say a scuba diver got killed by a shark attack in the Bahamas. So they pull up their anchor and go back home to South Florida, and we are stuck with the negative publicity of a situation they created through negligence and incompetence."

Protocols for tiger shark diving without a cage include keeping people in a tight, confined area where they can be seen all the time, Watson says. "The crew should have seen what was going on the second it occurred, and been there to assist. You don't just later find out that you are missing somebody -- I think it was negligence on the part of the company." While the Bahamas Diving Association has no control over U.S. dive operators, it's in discussions with the Bahamas government to ensure that they follow that country's official diving procedures.

Undercurrent contributor Bret Gilliam stands up for Abernethy and how Scuba Adventures runs its dives, and divers who sign up for his trips should be aware of all possibilities and accept the outcomes. "Petty made a deliberate, informed decision to dive outside cages with sharks, specifically tigers. These are known potentially dangerous predators and there are obvious risks. It is up to the individual diver to decide if those risks are acceptable. Jim Abernethy has excellent protocols for his operation, provides complete briefings and advice prior to dives, and emphasizes that this activity can incur extreme hazards and risk of attack. Guests must execute a detailed and fully descriptive waiver and release document that lays out all potential risks. There is no question that divers are fully informed and it's up to them to make a conscious intelligent decision to participate."

And if Abernethy follows his own past procedures, he's not going to do anything different. He spoke to *Undercurrent* back in 2009, after Scuba Adventures was cleared of wrongful doing in Markus Groh's death. "The main reason why I haven't changed anything is because sharks don't eat people," he said then. "Sharks do not seek them out, I've never seen a shark being aggressive toward people. He said he looks at sharks the way the Audubon Society looks at birds. "They've been selling bird feeders for years, and birdwatchers feed birds, but every now and then, a bird will bite a person as a mistake. However, feeding the birds is an opportunity for people to get close to these animals so they can see them."

-- Vanessa Richardson

Fish ID Apps for Your Smartphone and Tablet

Reader Nadine Walley (Scottsdale, AZ) asked us, "Where I can buy fish ID apps? I'm hoping there's a Reef ID app for Paul Humann and Ned DeLoach's *Reef Fish Tropical Pacific* and *Reef Creature Tropical Pacific* for my iPad Mini." Fish ID apps are still not so plentiful yet, and Android lags behind Apple in offering them But here are our favorites and where to find them.

Both Humann/DeLoach books on tropical Pacific reef fish and creatures are available for iPads. They're also available for Androids and iPhones, but one must first download an app made by Blio before you're able to download the e-book. As for computers, Blio only works on Windows, not on Macs. \$30 each. (www.fishid.com/blio.html).

The Smithsonian Tropical Research Institute has two great -- and free -- iPhone apps. "Fishes: East Pacific" is a guide to shore fishes of the tropical Eastern Pacific Ocean, and was put together by Ross Robertson and Gerald Allen, two expert fish guys. Species can be browsed by common name, Latin name or family (https://itunes.apple.com/us/app/fishes-east-pacific.-identification/id494644648?mt=8). There's also "Greater Caribbean Fishes," which covers everything from the typically-seen queen angelfish and spotted drums to Florida's deepwater treasures *Lipogramma regium* and *Plectranthias garrupellus*. Nearly 1,600 species are covered in 5,500 pictures. (https://itunes.apple.com/us/app/fishes-greater-caribbean/id570048678?mt=8)

For Hawaii-loving divers, "Reef Critter Hawaii" shows 374 invertebrate species on an iPhone/iPad, and each image is accompanied by a small description, organized by species and family, and comes with links to external video content. The same app developer makes "Reef Fish Florida and Caribbean," which settles those post-dive discussions about angelfish versus emperorfish with 400 photos and descriptions written by marine experts. It also comes with links to external videos, and options to store your favorites. Each app is \$5 (http://indigo.malinowski.com).

Flotsam & Jetsam

Smart Divers Sign Up for This Program. Before he left for a Red Sea liveaboard trip last month, Undercurrent reader George Constantino (Anchorage, AK) signed up with the Smart Traveler Enrollment Program (STEP), a free service offered by the U.S. State Department to let Americans traveling abroad inform the nearest U.S. embassy or consulate about details of their trip. The benefits: You get info from the embassy about safety conditions in your destination country, and it can contact you in case of an emergency, whether a natural disaster there or a family emergency back home. "It was comforting to know what was happening in the country before we arrived, and that someone in the State Department knew our travel itinerary," says Constantine. And with more civil strife in global headlines these days, it's wise for travelin' divers to let U.S authorities know where they're headed overseas. Sign up for STEP at https://step.state.gov/step.

Do You Have DON and Don't Know It? One diving malady seldom discussed is dysbaric osteonecrosis (DON), which is caused in divers by a reduction in blood flow due to a nitrogen embolism blocking the blood vessels. This may result in major damage to bone structures in the shoulders and hips — and if one develops it, the symptoms are so subtle, even invisible, the person often wouldn't know. A recent study examined Japanese divers who visited the hospital between 1981 and 2012 to be evaluated for DON. It was seen most in those who dived to maximum depths of 66 to 95 feet, with average depths between 33 to 62 feet. Doc Vikingo has written a full story about DON; read it at our blog (www.undercurrent.org/blog).

When Lightning Strikes the Water. Southern California got a rare summer thunderstorm last month, and it led to one person dead and seven others hospitalized after a lightning bolt hit the water near the pier at Venice Beach, electrifying it and zapping swimmers and surfers in the area. While 75 percent of fatalities by lightning strikes in the U.S. are in open fields or near trees, 12 percent happen in or near water, so potentially, lightning is the biggest weather danger for divers. This brings to mind the July 2007 death of diver Stephen Wilson, who died when lightning hit his tank. Despite a severe thunderstorm warning in effect, he went boat diving with friends near Miami. Wilson resurfaced 30 feet from the boat when the lightning bolt struck his tank and knocked him unconscious. He was pronounced dead from electrocution minutes later. So when there's a thunderstorm brewing near the water, think twice before diving.

Seahorses Only Look Cute. They growl when they're angry, says a new study in the *Journal of Zoology*. Researchers from Brazil's Universidade Federal de Pernambuco put a hydrophone in an aquarium tank to record seahorses during feeding, courtship and handling by humans. The seahorses emitted happy-sounding clicks as they fed, and males and females both clicked away during courtship. But when a human held a seahorse near the hydrophone, the equipment picked up a very angry "growl," accompanied by body vibrations. Researchers believe the actions are escape mechanisms to startle predators.

"For a Lobster, a Life." Florida's lobster mini-season got off to a deadly start in Pompano Beach, and it claimed a talented young man with so much potential. Around 8:30 a.m. on July 31, authorities got a call about an an unconscious diver named Joseph Grosso who had been lobster diving on a commercial dive boat. The group had just got back into the boat from a dive when Grosso, 22, decided to go back into 40 feet of water alone. The crew realized Grosso had not resurfaced and began searching for him, but he was found unresponsive. After CPR and life support-efforts, Grosso was pronounced dead at the hospital. Just the day before, Grosso, a graduate of the University of Pennsylvania, had been added to the University of Miami's football roster as a linebacker, and he was planning to start law school. His stepfather, Philip Franchina, wants divers to learn from Grosso's death, saying, "He went down [alone] to get one more lobster and at the end of the day, for a lobster, a life."

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